

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>LBP1005PC00</b>	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. <b>PCT/EP2005/002538</b>	International filing date (day/month/year) <b>10/03/2005</b>	(Earliest) Priority Date (day/month/year) <b>10/03/2004</b>
Applicant  <b>LONZA LTD.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☒ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 1



as suggested by the applicant.



as selected by this Authority, because the applicant failed to suggest a figure.



as selected by this Authority, because this figure better characterizes the invention.

- b. ☐ none of the figures is to be published with the abstract.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP2005/002538

## Box No. I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.b of the first sheet)

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, the international search was carried out on the basis of:
  - a. type of material
    - ☒ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material
    - ☒ in written format
    - ☒ in computer readable form
  - c. time of filing/furnishing
    - ☐ contained in the international application as filed
    - ☐ filed together with the international application in computer readable form
    - ☒ furnished subsequently to this Authority for the purpose of search
2. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
3. Additional comments:

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP2005/002538

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07K16/00 C12N15/16 C12N5/10 C12N15/62

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, WPI Data, PAJ, EMBASE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SWENNEN DOMINIQUE ET AL: "Secretion of active anti-Ras single-chain Fv antibody by the yeasts <i>Yarrowia lipolytica</i> and <i>Kluyveromyces lactis</i> " MICROBIOLOGY (READING), vol. 148, no. 1, January 2002 (2002-01), pages 41-50, XP002350347 ISSN: 1350-0872 abstract; figure 1 ----- -/--	30, 31, 40, 42, 50-53



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*Z\* document member of the same patent family

Date of the actual completion of the international search

21 October 2005

Date of mailing of the international search report

07/11/2005

Name and mailing address of the ISA

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## INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP2005/002538

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WONG MICHAEL J ET AL: "Processing of human factor I in COS-1 cells co-transfected with factor I and paired basic amino acid cleaving enzyme (PACE) cDNA" MOLECULAR IMMUNOLOGY, vol. 32, no. 5, 1995, pages 379-387, XP002350310 ISSN: 0161-5890 the whole document	1-47, 49-57
Y	EP 1 099 758 A (GENENTECH INC) 16 May 2001 (2001-05-16) abstract	1-47, 49-57
Y	SANTOS A D ET AL: "GENERATION AND CHARACTERIZATION OF A SINGLE GENE-ENCODED SINGLE-CHAIN-TETRAVALENT ANTITUMOR ANTIBODY" CLINICAL CANCER RESEARCH, THE AMERICAN ASSOCIATION FOR CANCER RESEARCH, US, vol. 5, no. 10, October 1999 (1999-10), pages 3118S-3123S, XP000929841 ISSN: 1078-0432 cited in the application abstract	1-47, 49-57
Y	RIDDER R ET AL: "GENERATION OF RABBIT MONOCLONAL ANTIBODY FRAGMENTS FROM A COMBINATORIAL PHAGE DISPLAY LIBRARY AND THEIR PRODUCTION IN THE YEAST PICHIA PASTORIS" BIO/TECHNOLOGY, NATURE PUBLISHING CO. NEW YORK, US, vol. 13, no. 3, March 1995 (1995-03), pages 255-260, XP002008019 ISSN: 0733-222X abstract	1-47, 49-57
Y	LEE JEEWON ET AL: "Novel secretion system of recombinant Saccharomyces cerevisiae using an N-terminus residue of human IL-1beta as secretion enhancer" BIOTECHNOLOGY PROGRESS, vol. 15, no. 5, 1999, pages 884-890, XP002211009 ISSN: 8756-7938 abstract	1-47, 49-57
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International Application No

PCT/EP2005/002538

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WHITTLE N ET AL: "EXPRESSION IN COS CELLS OF A MOUSE - HUMAN CHIMAERIC B72.3 ANTIBODY" PROTEIN ENGINEERING, OXFORD UNIVERSITY PRESS, SURREY, GB, vol. 1, no. 6, 1 December 1987 (1987-12-01), pages 499-505, XP000005250 ISSN: 0269-2139 cited in the application abstract; figures 2,3 -----	1-47, 49-57
A	HATSUZAWA K ET AL: "PURIFICATION AND CHARACTERIZATION OF FURIN A KEX2-LIKE PROCESSING ENDOPROTEASE PRODUCED IN CHINESE HAMSTER OVARY CELLS" JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 267, no. 23, 1992, pages 16094-16099, XP002350311 ISSN: 0021-9258 abstract -----	1-47, 49-57

### Information on patent family members

PCT/EP2005/002538

Patent document  
cited in search report

Publication date

Patent family member(s)

Publication date

EP 1099758	A	16-05-2001	NONE
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